DERWENT-ACC-NO: 1987-008921
DERWENT-WEEK: 199647

TITLE: Non aq. sec. battery - has positive electrode of aniline (deriv.)
polymer made by oxidative polymerisation and converted to undoped state

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PRIORITY-DATA: 1986JP-0059542 (March 19, 1986) , 1985JP-0146766 (July 5, 1985)
, 1985JP-0146768 (July 5, 1985) , 1985JP-0180472 (August 19, 1985)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 208254 A	January 14, 1987	E	027	N/A
KR 9501257 B1	February 15, 1995	N/A	000	H01M 010/00
JP 62010861 A	January 19, 1987	N/A	000	N/A
JP 62010863 A	January 19, 1987	N/A	000	N/A
JP 62043065 A	February 25, 1987	N/A	000	N/A
JP 62217564 A	September 25, 1987	N/A	000	N/A
US 4740436 A	April 26, 1988	N/A	017	N/A
CN 8605275 A	April 1, 1987	N/A	000	N/A
EP 208254 B1	February 24, 1993	E	018	H01M 010/40
DE 3687804 G	April 1, 1993	N/A	000	H01M 010/40

CITED-DOCUMENTS: 4.Jnl.Ref; A3...8908 ; DE 3615975 ; FR 2545494 ; FR 2554822
; JP60097568 ; JP60097570 ; No-SR.Pub

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
EP 208254A	N/A	1986EP-0109020	July 2, 1986

KR 9501257B1	N/A	1986KR-0005439	July 5, 1986
JP62010861A	N/A	1985JP-0180472	August 19, 1985
JP62010863A	N/A	1986JP-0059542	March 19, 1986
US 4740436A	N/A	1986US-0882009	July 3, 1986
EP 208254B1	N/A	1986EP-0109020	July 2, 1986
DE 3687804G	N/A	1986DE-3687804	July 2, 1986
DE 3687804G	N/A	1986EP-0109020	July 2, 1986
DE 3687804G	Based on	EP 208254	N/A

INT-CL_(IPC): H01M004/60; H01M010/00 ; H01M010/40

ABSTRACTED-PUB-NO: EP 208254A

BASIC-ABSTRACT: A non-aq. sec. battery comprises a positive electrode consisting of a polymer of aniline or an aniline deriv. formed by converting a doped polymer obtd. oxidative polymerisation to an undoped state, and a negative electrode composed of (i) an alkali metal, (ii) an alkali metal alloy, (iii) an electroconductive polymer or (iv) an alkali metal or alkali metal alloy/electroconductive polymer composite.

Pref. the positive electrode is of a homopolymer or copolymer of cpds. (I) or (II) in which R1-R6 independently = H, 1-5C alkyl or 1-5C alkoxy and X and Y independently = H or phenyl. The doped polymer is obtd. by subjecting the aniline or aniline deriv. to electrochemical oxidative polymerisation in a solvent capable of dissolving the aniline (deriv). at a current density of 0.01-50 mA/cm2 and a voltage of 1-300 V in the presence of a complexing agent of formula M+A- in which M+ = H+, NH4+, Li+, Na+ or K+ and A- = BF4-, AsF4-, AsF6-, SbF6-, SbCl6-, PF6-, ClO4-, HSO4-, SO4=, Cl-, Br- or F-. Pref. the polymer is prepd. in the presence of a strong acid exerting an oxidative action in the water-dissolved state, or in the presence of a strong acid and an oxidant. The doped polymer is converted to the undoped state by at least one treatment chosen from (i) treatment with an aq. alkali soln., (ii) electrochemical redn. treatment and (iii) heat treatment at 100-300

deg.C.

ADVANTAGE - The batteries have good charge/discharge characteristics, high
energy density, very low self-discharge ratio and good thermal stability.

ABSTRACTED-PUB-NO: EP 208254B
EQUIVALENT-ABSTRACTS: A non-aqueous secondary battery comprising a positive
electrode (3) composed of a polymer of aniline or an aniline derivative and a
negative electrode (4), composed of (i) an alkali metal, (ii) an alkali metal
alloy, (iii) an electroconductive polymer or (iv) an alkali
metal/electroconductive polymer composite or an alkali metal
alloy/electroconductive polymer composite, whereby the polymer of an aniline or
an aniline derivative is formed by converting a doped polymer prepared by
oxidative polymerisation to an undoped state prior to electrode implementation
in the battery, the conversion of the doped polymer to an undoped state being
effected by treating the doped polymer with an aqueous solution of an alkali
and then heat-treating the polymer at a temperature of 100 to 300 deg.C..

US 4740436A

Non-aq. sec. battery has a positive electrode comprising a polymer (I) of
aniline (deriv.) and a negative electrode comprising (1) alkali metal, (2)
alkali metal alloy, (3) electroconductive polymer or (4) alkali metal
(alloy)/electroconductive polymer composite. (I) is obtd. by converting a
doped polymer prepd. by oxidative polymerisat ion to an undoped state by (a)
treatment with aq. alkali soln. or (b) heat treatment at 100-300 deg.C.

ADVANTAGE - The battery shows low self-discharge ratio, large electric
capacity, good reversibility between charging and discharging, high energy
density and good thermal stability. (17pp)c

CHOSEN-DRAWING: Dwg.2/2 Dwg.1/2

TITLE-TERMS:
NON AQUEOUS SEC BATTERY POSITIVE ELECTRODE ANILINE DERIVATIVE POLYMER MADE
OXIDATION POLYMERISE CONVERT UNDOPED STATE

ADDL-INDEXING-TERMS:
DERIVATIVE

DERWENT-CLASS: A26 A85 L03 X16

CPI-CODES: A05-J11; A09-A03; A12-E06A; L03-E01B9;

EPI-CODES: X16-B01X; X16-E01;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0659U; 1534U ; 1644U ; 1740U ; 5085U

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:
Key Serials: 0004 0015 0016 0018 0021 0201 0203 3002 0208 0209 0210 0041 0044
0047 0073 0158 0161 0173 0231 0248 0947 1311 3194 3195 3111 1741 1747 1920 2001
2011 2022 2051 2054 2066 2074 3209 2148 2152 2172 2174 2198 2204 2207 2217 2318
2382 2386 2427 2432 2439 2513 2541 2551 2585 2589 2646 2654 3256 2682 2728 2739
Multipunch Codes: 014 038 04- 041 045 046 05& 05- 050 06- 062 063 064 07& 08&
087 09& 09- 10& 15& 151 153 163 18& 18- 185 190 191 20- 206 225 227 228 230 231
24- 248 250 278 284 287 307 308 310 316 334 344 346 347 351 355 358 359 393 398
402 405 408 409 431 435 438 47& 477 50& 506 509 516 518 540 546 56& 575 58& 581
583 589 59& 596 60- 609 623 627 683 688 689 691 693 720 724
SECONDARY-ACC-NO:
CPI Secondary Accession Numbers: C1987-003356
Non-CPI Secondary Accession Numbers: N1987-006518